## COMPENSATION AND NON-COMPENSATION INDUCEMENTS AND THE SUPPLY OF MILITARY MANPOWER

by

Sheldon E. Haber

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This paper focuses on several non-compensation inducements to enlistment, namely location and unit guarantees, reduced active service enlistment periods, and formal and informal skill training. The data examined lend support to the view that benefit packages incorporating a variety of non-compensation benefits can result in greater effectiveness of the AVF budget dollar than the current approach which gives primary emphasis to military compensation as the means of attracting young people to military service.

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## THE GEORGE WASHINGTON UNIVERSITY Graduate School of Arts and Sciences Econometric Research on Navy Manpower Problems

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## 0. Introduction

For the most part, economic studies of the All-Volunteer Force (AVF), at least those that have been published in the literature, have had a limited scope, namely, the influence of inducements in the form of compensation on the supply of military manpower [1] [2] [6]. Even within the area of compensation incentives, attention has focused primarily on a single variable, the relationship between military and civilian earnings. One reason for this is that relative earnings are important in influencing the enlistment decision. Additionally, such a measure can be quantified and incorporated in econometric models. The general concensus of this research appears to be that the supply of enlistees is elastic with respect to the military/civilian wage rate. Based on this finding, it has been concluded that the AVF is feasible and can be achieved at reasonable cost.

Verification of this claim is at best a very difficult task. First, there is the problem of defining the size and composition of the military force that is consistent with national security. Second, there is the problem of defining the level of expenditures which is reasonable for the attainment of these goals in an AVF environment. These difficulties

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notwithstanding, recent experience with the combat arms enlistment bonus, in particular the need to raise the bonus from \$1,500 to \$2,500, indicates that the cost of the AVF may be higher than anticipated.

In addition to compensation in the form of military pay, noncompensation factors such as location and unit guarantees, length of
enlistment, on-the-job and formal training in a skill, and benefits which
become effective after termination of military service also affect the
enlistment decision. These particular inducements are the subject of this
paper. Here again the choice is determined by the availability of quantifiable measurements. For each of the factors noted some information other
than survey data is extant. On the other hand, at the present time one can
hardly talk about any non-compensation incentives without introducing
survey data.

Little attention has been given to non-compensation inducements despite accumulating evidence that they may be as effective as compensation incentives. Although only suggestive, the empirical data lend support to the view that the effectiveness of the AVF budget dollar can be increased by policies which incorporate both types of inducements rather than one which relies primarily on pay. This view depends in part on effectiveness considerations but relies on cost considerations as well, in particular that the economic rent paid to enlistees, i.e., benefits in excess of those necessary to induce enlistment, may be less for the former, i.e., the mixed policy approach, than for the latter.

## I. The Military/Civilian Wage Rate

Of considerable importance in assessing the success of the AVF is the current relative entry level wage in the military and civilian sectors. Two measures of entry level regular military compensation (consisting of basic pay, allowances, and the tax advantage) are used in computing the military/civilian wage rate shown in Table 1. The first is the regular military compensation of recruits with rank E-1 and less than four months service in the military. The second is the regular military compensation of individuals with less than four years of military service. The former

is the more appropriate measure of entry level wages in the military but the latter takes experience into account and is closer in concept to the measure of entry level earnings used for the civilian sector. The estimate of entry level civilian earnings was obtained by weighting income data for full-time full-year male workers age 16-19 and 20-24 using weights of .70 and .30, respectively. 2

As can be seen from these data, the military/civilian wage depends on the measure of wages used. For example, assuming that young people perceive their opportunity costs in terms of peer group earnings, when the compensation of enlisted personnel with less than four years service is used to measure the entrance level military salary, the military/civilian wage rate is markedly higher (42 percent in 1971, 19 percent in 1972) than when the compensation of E-1's with less than four years of service is used. Regardless of which series is employed, for policy purposes the important figures are those for 1972 which presumably young people are thinking about when they contemplate whether to enlist in the military. From the data in Table 1, it appears that the military/civilian wage fell between 1963-69 but that the decline was reversed by the new schedule of pay and allowances effective 14 November 1971. In 1972, entrance level military pay exceeded civilian pay by 4 to 24 percent depending on how military pay is measured. Although no single relative wage makes military service attractive to all individuals, if the criterion for job choice (as distinct from career choice) is solely maximization of money income during a short time interval, say, two to four years, military service is now the more attractive alternative. Yet it is becoming clear that given current minimum military quality

The military and civilian wage rate data underlying Table 1 are shown in Appendix Tables 1 and 2, respectively.

<sup>&</sup>lt;sup>2</sup>These weights were derived from Marine Corps data for January - May 1973. For the Marine Corps 76.6 percent of the recruits during this period were age 17-19. Since enlistees in the Marine Corps tend to be younger than for the other services, the weight for the 17-19 group was reduced to the figure given in the text.

<sup>&</sup>lt;sup>3</sup>For non-whites the military/civilian wage in 1972 ranged from 1.21 to 1.43.

TABLE 1
MILITARY/CIVILIAN WAGE RATE

	$(1) \frac{a}{}$	(2) $\frac{b}{}$
1963	0.78	0.95
1964	0.74	0.94
1965	<u>c</u> /	<u>c</u> /
1966	0.72	0.94
1967	0.68	0.84
1968	0.71	0.95
1969	0.66	0.91
1970	<u>c</u> /	<u>c</u> /
1971	0.71	1.01
1972	1.04	1.24

 $<sup>\</sup>frac{a}{m}$  Military wage rate: Regular military compensation of all E-1's with less than four months military service.

Sources: Unpublished data provided by the Directorate of Compensation, Department of Defense; and Bureau of the Census, U.S. Department of Commerce, Consumer Income, Series P-60.

Civilian wage rate: Weighted income of full-year full-time males age 14-24, 1963-66 and 16-24, 1967-72.

 $<sup>\</sup>frac{b}{M}$  Military wage rate: Regular military compensation of all individuals with less than four years military service.

Civilian wage rate: See footnote a/.

c/Not available.

standards, attainment of an AVF will be difficult to achieve (see [5] [7]). Given this state of affairs, the question arises as to how to proceed to make the AVF more attractive to young people. One way to proceed is to continue increasing military compensation either in the form of military pay or bonuses. An alternative approach would be to focus on non-compensation inducements to enlistment.

## II. Guarantees Other Than Training Guarantees

The importance of non-compensation inducements in influencing the enlistment decision is well known. The most obvious non-wage consideration is whether the military is engaged in combat and whether the combat objectives are deemed reasonable and justified. Another factor, somewhat related to this one, is the impact on enlistments of guarantees other than training guarantees, such as choice of location and unit. Location guarantees may be desirable because they increase the probability that an individual will not be sent to an unwanted place and/or insures that the individual will be assigned to a place where he wishes to go because of its favorable climate, sight-seeing attractions, etc. Similarly, unit guarantees can provide benefits which enhance the attractiveness of military service.

<sup>&</sup>lt;sup>4</sup>Of some interest, when military pay is measured by the regular compensation of individuals with less than four years service, the military/civilian wage is seen to have been close to one during most of the 1963-72 period. One implication of this finding is that the supply of military manpower in an AVF environment may be insufficient to meet wartime needs irrespective of how well it succeeds in peacetime.

Strictly speaking, bonuses such as enlistment and reenlistment bonuses are not classified as wages. They are treated as compensation in this paper since they are intended to make the military wage structure more flexible. The G.I. Bill and retirement benefits, although payable in cash, are defined as non-compensation inducements since these are deferred payments that fall under the heading of income rather than earnings, and are received only if individuals exercise an option, e.g., enrolling in school or reenlisting.

That the availability of these guarantees, which reduce the uncertainties associated with military service, influences the enlistment decision can be seen from Table 2. The large rise in combat arms enlistments between June - December 1971 as compared to a similar period in 1970 "was achieved by offering the choice of overseas locations and unit assignments to combat arms enlistees, by advertising these new options and by aggressively recruiting candidates for them" [9, p. 9].

As of June 1972, when the combat arms enlistment bonus (CAEB) was introduced, location and unit guarantees were extended to other Army programs. Thus the periods June 1971 - May 1972 and June 1972 - May 1973 offer an interesting contrast. In the former period the differential inducement between combat arms and other programs was the availability of location and unit guarantees. In the latter period, the differential inducement was the CAEB. It is of some interest that enlistments during the early period when the bonus was not in effect were somewhat higher than in the latter period when the bonus was in effect.

It is likely that the higher enlistment levels during June 1971 - May 1972 were due not so much to the fact that location and unit guarantees assured individuals desirable assignments as to the fact that they increased the probability of not being given undesirable assignments. Yet one notes that enlistments in combat arms were higher during January - May 1972 than during January - May 1973 even though draft calls fell by one-half in 1972, to 50,000, before being discontinued in December 1972. Despite the considerable weakening of the negative attraction of location guarantees by the early months of 1972, large numbers of individuals continued to enlist in combat arms. In contrast, during the early months of 1973 when location guarantees were extended to other occupation areas, the number of combat arms enlistments did not increase over earlier levels even though the CAEB

<sup>&</sup>lt;sup>6</sup>Expenditures on recruitment and advertising form another category of expenditures aside from expenditures resulting in compensation and non-compensation benefits. The effectiveness of such expenditures is beyond the scope of the paper. A discussion of the impact of the recruiter resource on enlistment rates is found in [4].

was being offered. One interpretation of these data is that individuals give considerable weight to guarantees other than training guarantees, e.g., location options, in choosing a job within the military, and may join the military to avail themselves of such opportunities (see Table 4). In particular, the decline in enlistments in combat arms during January - May 1973 may have been due to enlistees choosing non-combat specialties as a result of location and unit guarantees being made available in these occupations. The data are of limited scope, however, and are consistent with other interpretations, e.g., even though the Vietnam War was being wound down in 1972, 1972 and 1973 represent vastly different environments. If this view is taken, one may conclude that locational choice is important only in times of national emergency.

## III. Length of Enlistment and Quality of Military Manpower

Although not normally considered a non-compensation inducement to enlistment, the length of enlistment has important monetary implications for the potential enlistee. For the individual who views military service as a career, the shorter the length of enlistment the less the loss of future income should it turn out that his initial choice was an unhappy one. The same is true for the individual who views military service as an interim job between leaving school and beginning a career in the civilian sector. And it is clear in both cases that the opportunity cost of military service is higher the higher one's educational attainment.

Some indication of the relationship between length of enlistment and educational attainment is found in Table 3. Navy data are used since the percentage of enlistees in guarantee programs is substantially smaller for this service than for the other services, and hence the impact of guarantee programs on educational attainment and length of enlistment is minimized. As can be seen from Table 3, as enlistment length increases, the percentage of enlistees with a high school education or better decreases, from 51.5 percent among two year enlistees to 30.5 percent among four year enlistees.

<sup>&</sup>lt;sup>7</sup>The impact of location and unit guarantees in an AVF environment could be better ascertained if such guarantees were limited to combat arms as in the June 1971 - May 1972 period.

TABLE 2

COMBAT ARMS ENLISTMENTS, U.S. ARMY

	Combat Arms	Inducements			
	Enlistments	Combat Arms	Other Programs		
July-Dec. '70	1,362				
June-Dec. '71	22,673	Geographic and			
JanFeb. '72	6,751	Unit Guarantees			
MarMay †72	8,300				
June-Dec. †72	26,831	Geographic and	Geographic and		
JanFeb. '73	5,773	Unit Guarantees	Unit Guarantees		
MarMay '73	3,725	Plus Bonus			
	,				

Sources: Unpublished data from the Office of the Assistant Secretary of Defense, Manpower and Reserve Affairs; Office of the Secretary of Defense, The All-Volunteer Force and The End of the Draft, March 1973, p. 10; and Comptroller General of the United States, Problems in Meeting Manpower Needs in the All-Volunteer Force, Report B-177952, 1973, p. 41.

TABLE 3

THE PERCENTAGE OF MARINE CORPS ENLISTEES BY LEVEL OF EDUCATION AND LENGTH OF ENLISTMENT, JAN.-MAY 1973

Length of Enlistment	Less than High School	High School	More than High School	Total
2 years	48.5	42.4	9.1	100.0
3 years	62.6	32.9	4.5	100.0
4 years	69.5	27.3	3.2	100.0

Source: Unpublished data provided by the U.S. Marine Corps.

The figures in Table 3 understate the inverse relationship between educational attainment and length of enlistment since many three and four year enlistees are in guarantee programs where minimum mental and/or education standards are higher than for the Marine Corps as a whole.

These data suggest that one way of offsetting the decline in quality among true volunteers, as measured by educational attainment, is to reduce minimum enlistment terms. The minimum enlistment period for the Army and Marine Corps is now two years and for the Air Force and Navy, four and three years, respectively. It may appear, therefore, that there is little leeway in this area for flexibility. However, there are many guarantee programs where the minimum service length could be reduced by one and possibly two years.

This approach to increasing the quality of military manpower is not without disadvantages since the period during which training expenses can be recouped is shortened. For example, if training time is one year, three years of "effective" service can be obtained from four year enlistees but only two years are obtained from three year enlistees. This loss in effective service can result in a substantial rise in the cost of maintaining a given size force. However, the relevant option in an AVF enivronment is not necessarily four or fewer years of active service; rather, it may be some combination of years of active service and ready and/or standby reserve duty. Coupling of reduced active service and more intensive or longer reserve service could provide a means of maintaining the productivity of training. Given the current difficulty of meeting quality standards in the military and the shortfalls being experienced in the reserve forces [8],

<sup>&</sup>lt;sup>8</sup>The three year enlistment was adopted by the Navy in April 1972. The Marine Corps reduced the minimum enlistment period from three to two years in 1966.

<sup>&</sup>lt;sup>9</sup>Assuming training time is one year, six years of effective service can be obtained from (1) two four-year enlistments or (2) three three-year enlistments. If average training costs are \$11,900 (the average for the Navy in 1971) and yearly compensation \$6,000 (the average for individuals with less than four years service in 1972), the total cost of six years effective service is \$71,800 for the first alternative, \$89,700 for the second alternative.

the need to develop manpower policies which treat the active and reserve components of the AVF as complementary instead of separate sources of manpower enlarges the desirable and feasible set of enlistment length options.

One enlistment length option which might be considered is a one year enlistment in occupational areas requiring minimal skill training. 10 Restriction to occupations where little or no formal training is provided would bypass the difficulty of recouping training costs. The one year enlistment may also be viewed as an option increasing the readiness of non-technical specialties, e.g., combat arms, of the reserve component. Currently, individuals in this program undergo six months training and then obligate themselves to five years in the ready reserves and one year in the standby reserves. The one year enlistment coupled with a net reduction in the total reserve enlistment period and/or other benefits, e.g., educational benefits, provides another means of bringing the active and reserve components of the AVF into closer alignment while at the same time enabling the military to meet force size and quality standards. 11

## IV. On-the-Job Training and Formal Training

Since World War II there has been a steady increase in the proportion of the military work force in craftsmen and related occupations, from 35.0 percent in 1945 to 47.6 percent in 1967. At the same time the proportion of the experienced male work force in the civilian sector in craftsmen jobs has increased from 14.9 to 19.7 percent between 1940 and 1970. At the latter date, the craftsmen occupations were the largest source of employment for males in both sectors of the economy. Thus, for this occupation group,

<sup>&</sup>lt;sup>10</sup>The problem of the optimum mix of enlistment periods, of which the inclusion of a one year enlistment is one possibility, was suggested by Henry Solomon.

<sup>&</sup>lt;sup>11</sup>The question of whether current quality standards can be lowered without impairment of military effectiveness is beyond the scope of this paper.

<sup>12</sup> Although the experienced male civilian labor force is approximately 25 times as large as the enlisted military work force, the number of male civilian craftsmen is only 10 times as large as the number of craftsmen in the military. Moreover, among mechanics and repairmen, the ratio of male civilian to military workers is only two and one-half to one.

labor market conditions in the civilian economy can have major implications for manpower management in the military sector, and conversely, manpower policies in the latter sector can have an important impact on the former sector. For example, in a draft environment, much of the training provided by the military will be lost when draftees return to the civilian sector and embark on careers of their own choice. In an all-volunteer military establishment where individuals are much more likely to receive the type of training they desire, there is a correspondingly greater likelihood that if they choose a career in the civilian sector, it will be in a field related to their military training.

The trends just noted suggest that perhaps the most important non-compensation incentive in an AVF environment will be the availability of formal and informal training. Some evidence in support of this supposition is provided by the Gilbert Youth Survey [3] on attitudes of young people toward military service. As can be seen from Table 4, skill/job training is cited almost as often as compensation as the incentive, if any, which would induce enlistment. When attention was restricted to youths who indicated they might enlist at some time, training was rated by twice as many respondents as compensation as an incentive which would exert a strong influence on the decision to enlist.

Additional evidence of the drawing power of training incentives is provided in Table 5. The figures in this table show the number of enlistments in the Marine Corps in combat arms and other guarantee programs during the period January 1971 - May 1973. In the Marine Corps, guarantees were introduced in 1970 but were first used extensively in 1971. In contrast to the Army, the Marine Corps does not offer location or unit guarantees. Moreover, the guarantees for schooling and occupational training which are offered are available in only a limited number of broad programs, e.g., the aviation enlistment program, rather than in a wide range of detailed occupation specialties as is the case for the other services. Even though the Marine Corps guarantee program has been narrow in scope, guarantee program enlistments other than in combat arms have risen dramatically over time. Of special significance, the increase in enlistments in

TABLE 4
PAY VS. OTHER INCENTIVES TO ENLIST

363	Percent of Respondents
Incentive Which Would Induce Enlistment $\frac{a}{}$	
More Money / Better Pay	14
Skills / Job Training	12
Educational Benefits	9
Travel	8
Incentive Which Would Exert A Strong Influence $\frac{b}{}$	
Overall Benefits, e.g., Pay, Room and Board	24
To Learn a Trade or Skill	49
G.I. Bill	19
Travel	46

 $<sup>\</sup>frac{a}{}$ Open-ended question where respondents wrote in their choice.

Source: Assistant Secretary of Defense, Manpower and Reserve Affairs,
Attitudes of Youth Toward Military Service: Results of National
Surveys Conducted in May 1971, November 1971, and June 1972,
Report No. MA72-7, August 1972, pp. 68 and 79.

 $<sup>\</sup>frac{b}{}$ Structured question given to respondents who indicated some possibility of enlisting at some time.

guarantee programs other than combat arms between June - December 1972 was almost as large as the increase in enlistments in combat arms during the same period -- the period during which the combat arms enlistment bonus was introduced. The point to be emphasized is that training guarantees do appear effective in channeling enlistments, and although the data presented do not permit any hard conclusions, they may lead to increased enlistments. It should be noted, however, that the training provided in the past may need to be broadened to meet the manpower requirements of the AVF in the future.

In addition to training in the military, educational benefits in the civilian sector have been offered as a reward for military service and as an incentive to enter service. Although little is known about the impact of the G.I. Bill on enlistment decisions, some partial evidence indicates that it may exert a strong influence. First, as can be seen from Table 6, a large percentage of eligible veterans have received some form of training under the G.I. Bill. Obviously, for many individuals who received training, particularly among W.W. II veterans, the decision to enlist had little to do with the availability of educational benefits. Yet the proportion who have received training under the G.I. Bill is so large that it argues against the hypothesis that its suspension will have only a small impact on enlistments. 13 Second, the proportion of the population attending college and graduate school has grown steadily since W.W. II and in recent years the cost of higher education has been rising rapidly. This may explain why young people, as indicated in Table 4, rate educational benefits almost on a par with compensation. Third, recent surveys conducted at Armed Forces Examining and Entrance Stations prior to basic training (see Table 7) indicate that the availability of benefits under the G.I. Bill exerts a strong influence on enlistment among a significant proportion of enlistees. The data in Table 7 indicate that 29 percent of high school graduates would not have enlisted if benefits under the G.I. Bill were not available. Of particular significance, although it is not surprising that the G.I. Bill was

Even if this were the case, retention of the G.I. Bill may be justifiable on other grounds, i.e., that its economic and social benefits exceed its cost.

TABLE 5

COMBAT ARMS AND OTHER GUARANTEE PROGRAM ENLISTMENTS, U.S. MARINE CORPS

		Combat Arms Enlistments	Guarantee Program Enlistments <u>a</u> /
JanMay	71	563	1,265
June-Dec.	71	882	3,125
JanMay	172	630	3,203
June-Dec.	† 72	4,709	6,268
JanMay	173	1,777	6,984

 $<sup>\</sup>underline{a}/$ Excludes guarantee programs in combat arms.

Source: Unpublished data provided by the U.S. Marine Corps.

TABLE 6

PERCENTAGE OF ELIGIBLE VETERANS WHO RECEIVED TRAINING UNDER THE G.I. BILL

	W.W. II	Korean War	Post Korean War a/
Eligible (In Millions)	15.6	5.7	9.1
Received Training (In Millions)	7.8	2.4	3.3
Percent Received Training	50.0	42.1	36.2

 $<sup>\</sup>frac{a}{A}$ As of June 1972.

Source: Sar A. Levitan and Joyce Zickler, "The Effects of Veterans Benefits on Reenlistment," The George Washington University, Graduate School of Arts and Sciences, Serial TM-1081, 7 December 1972.

## TABLE 7

## INFLUENCE OF THE G.I. BILL ON ENLISTMENTS

Armed Forces Examining and Entrance Station Surveys:

Percentage of Army True Volunteers Stating G.I. Bill Was a Strong Influence  $\underline{a}/$ 

Non-High School Graduates	26
High School Graduates	31
Some College	43

Percentage of High School Graduate Enlistees Who Would Not Have Enlisted Without the G.I. Bill  $\underline{b}/$  29

 $\frac{a}{FY}$  1972.

 $\frac{b}{April}$  1973.

Source: From Frederick Suffa, "Youth Attitudes Toward Military Service -- The Gilbert and Related Attitudinal Surveys," paper presented at the 31st Military Operations Research Society, Annapolis, Maryland, 19-21 June 1973.

most attractive to individuals with some college training, more than onequarter of the non-high school graduates indicated that the G.I. Bill exerted a strong influence on their decision to enlist.

## V. Non-Compensation Benefits and Minimization of Economic Rent

Granting that non-compensation benefits have a monetary value, the question arises as to the advantages of such inducements over compensation. It should be noted, first, that a given non-compensation benefit may have a different impact on enlistments than an equivalent payment in the form of basic pay. For example, a given type of training which has a monetary price tag may be available to individuals only in the military. Second, the structure of military compensation is such that it tends to generate economic rent. Unlike the civilian sector where entrance level wages are quoted as a range, e.g., \$8,000 - \$10,000, depending on experience and qualifications, in the military the entrance level wage is uniform as long as individuals meet some minimum set of standards. Moreover, although promotions are related to achievement, rank tends to be based on time-inservice. Thus, military compensation does not fully take into account variations in the quality of labor. One result of this is that the variance in pay in the military sector is likely to be less than in the civilian sector, leading to the payment of economic rent to enlistees whose marginal value product is low in both sectors. This tendency is strengthened on the supply side where as indicated above, enlistments appear to be responsive to a wide variety of non-compensation inducements.

The approach of equal pay for equal duty emphasized in the military can be contrasted with the approach of equal benefits for equal duty.  $^{14}$  For example, consider three individuals of equal capability, each of whom would enlist for a total benefit package of \$6,000 and assume that the average value of travel and training benefits are \$500 and \$1,500,

<sup>&</sup>lt;sup>14</sup>Where the quality of labor differs, total benefits should also differ. The problem of measuring the quality of labor is not an easy one, and it is more complex in the military context than in the civilian. For simplicity, it is assumed that procedures are available for classifying individuals on the basis of quality.

respectively. Also assume that the first individual enlists because of the desire to travel, the second because he wants to learn a trade, and the third, whose time horizon is "now," would offer his services to the highest bidder, which is \$6,000 per year offered by the military, even if travel, training, and other benefits were not available. Under current salary practices, each enlistee might expect to receive approximately \$6,000 per year in regular military compensation resulting in economic rent of \$500 and \$1,500 to the first and second enlistees, respectively. Additionally, none, one, ..., or all of these individuals may elect to receive training under the G.I. Bill. Although equal pay appears equitable and has been advanced as a means of maintaining morale, it leads to inequities when non-compensation benefits are an important part of the total benefit package. This discussion points to the need for offering alternative mixes of inducements of equal total value to potential volunteers so that the matching of benefits and utility preferences is maximized and economic rent paid to enlistees is reduced. In this situation, enlistees could be separated on the basis of tastes, and benefits which do not cater to these tastes could be minimized on an individual basis.

If the approach of equal total benefits rather than equal pay were adopted, it would be necessary to explicitly determine the value of non-compensation benefits. This task does not appear insurmountable. For example, it should not be too difficult to estimate the value of locational guarantees. The value of training in the military can be estimated on the basis of expected earnings in the civilian sector of individuals who did and who did not receive training of a given type. Likewise, the expected value of the G.I. Bill to different groupings of enlistees is in principle ascertainable.

To summarize this discussion, if it is granted that although pay is very important in the enlistment decision process, there are a large number of perhaps equally important non-compensation inducements, then the appropriate benefit mix and strategy to minimize the cost of the AVF becomes quite different from the one that would be optimal if it is assumed that young people are motivated solely by the military/civilian wage rate.

## VI. Summary

The literature on the All-Volunteer Force (AVF) has been concerned principally with the wage elasticity of supply of true volunteers for military service. The direction of this research has been shaped by the need to estimate the cost and, hence, feasibility of the AVF program. Implicit to this approach has been the assumption that non-compensation inducements are of minor importance to individuals contemplating military service.

The data presented in this paper, although by no means conclusive, suggest that non-compensation enlistments exert a strong influence on the enlistment decision. The non-compensation inducements examined are guarantees other than training guarantees, in particular, location and unit guarantees, reduced active service enlistment periods, and formal and informal skill training. The data examined lend support to the view that benefit packages incorporating a variety of non-compensation benefits can result in greater effectiveness of the AVF budget dollar than the current approach which gives primary emphasis to military compensation as the means of attracting young persons to military service. A basic deficiency of this latter approach is that military pay does not provide a sufficiently flexible means for remunerating workers of different quality. The present emphasis on equity in military pay rather than equity in total benefits generates economic rent which can be reduced by offering alternative benefit packages of equal value which match the individual preferences of potential volunteers.

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## APPENDIX

TABLE 1 REGULAR MILITARY COMPENSATION  $\frac{a}{}$ 

	All E-1's with Less Than 4 Months Military Service	All individuals with Less Than 4 Years Military Service
1963	2,200	2,694
1964	2,189	2,786
1965	2,206	2,862
1966	3,324	3,010
1967	2,398	2,979
1968	2,615	3,485
1969	2,733	3,745
1970	3,030	4,073
1971	3,264	4,643
1972	5,116	6,088

 $<sup>\</sup>underline{\mathtt{a}}^{\prime}\mathsf{Calendar}$  year weighted averages. Includes basic pay, allowances, and the tax advantage.

Source: Unpublished data from the Directorate of Compensation, Department of Defense.

TABLE 2
CIVILIAN WAGE RATE

	Full-year Full-time		
	Income of Males		
	$16 - 19 \frac{a}{}$	20 - 24	
1963	2,221	4,229	
1964	2,364	4,339	
1965	<u>b</u> /	4,706	
1966	2,420	5,041	
1967	2,782	5,312	
1968	2,821	5,650	
1969	3,235	6,169	
1970	<u>c</u> /	6,655	
1971	3,707	6,674	
1972	3,966 <u>d</u> /	7,141 <u>d</u> /	

 $<sup>\</sup>frac{a}{A}$  Age 14-19, 1963-66.

Source: Bureau of the Census, U.S. Department of Commerce, Consumer Income, Series P-60.

 $<sup>\</sup>frac{b}{Reported}$  as \$3,074.

 $<sup>\</sup>frac{c}{Reported}$  as \$3,984.

 $<sup>\</sup>frac{d}{E}$  Estimated assuming the same annual rate of increase, 7.0 percent, as for private non-farm workers between 1971-72. (See Council of Economic Advisers, Economic Report of the President, Washington, D.C.: Government Printing Office, January 1973, p. 62.)

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